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APPLICATION NO.	FILING DATE	FIRST-NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,206	10/19/2001	Takashi Ohta	P63436US1	8010

136 7590 07/07/2003
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WASHINGTON, DC 20004

EXAMINER

LEE, EDMUND H

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,206

Applicant(s)

OHTA ET AL.

Examiner

EDMUND H LEE

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3, 4 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/274,346.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claim 10 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

2. Applicant's election without traverse of claims 3 and 4 in Paper No. 5 is acknowledged.

3. Claims 3-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "an radiation ray" (cl 3, ln 10) is idiomatically incorrect.

The phrase "said electromagnetic wave" (cl 4, lns 3-4) lacks antecedent basis.

Clarification and/or correction is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Repella (USPN 4705277) in view of Butler et al (USPN 4822058) and Tadic et al (USPN 5618488). In regard to claim 3, Repella teaches the basic claimed process including a process for making a sealing device having a sealing lip having a frustoconical air-side surface and a frustoconical oil-side surface and having a helical portion on the air-side surface (fig 4); and preparing a foreproduct of the sealing device having a rigid annular

Art Unit: 1732

casting, a molded elastomeric member bonded to the casing in one body and a sealing lip defined by a frustoconical air-side surface and a frustoconical oil-side surface (fig 4). However, Repella does not teach radiating a radiation ray on the frustoconical surface to form the harder portion. Butler et al teach a sealing device having a sealing lip having a frustoconical air-side surface and a frustoconical oil-side surface and having a harder portion on the air-side surface (col 4, 65-col 5, ln 27; fig 12); and preparing a foreproduct of the sealing device having a rigid annular casting, a molded elastomeric member bonded to the casing in one body and a sealing lip defined by a frustoconical air-side surface and a frustoconical oil-side surface (col 4, 65-col 5, ln 27; fig 12). Tadic et al teach a method of manufacturing a seal having portions with different hardnesses (col 1, ln 37-40; col 2, lns 43-50); and producing the difference in hardness by radiating to crosslink (col 1, ln 37-40; col 2, lns 43-50). Repella, Butler et al, and Tadic et al are analogous with respect to forming polymeric seals. It would have been obvious to one of ordinary skill in the art at the time the invention was made to harden the helical vanes of Repella as taught by Butler et al by the radiating method of Tadic et al in order to produce a diversified seal having enhanced effectiveness. In regard to claim 4, Repella teaches using a mask having a helical slit through which the etching means passes onto the frustoconical air-side surface to make the helical portions on the frustoconical air-side surface (col 3, lns 1-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mask of Repella to form the harder helical portions of Repella (modified) in order to accurately form the portions.


Art Unit: 1732

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Onuma et al (USPN 5759466) teach a method of making a lip seal. Symons (USPN 4300777) teaches molding a lip seal having a frustoconical air-side that is harder than the frustoconical oil-side. DE 19619999 A1 teaches molding a sealing lip and curing the lip by applying a UV light thereto.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H LEE whose telephone number is 703.305.4019. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD CRISPINO can be reached on 703.308.3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703.305.7718 for regular communications and 703.305.3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.


EDMUND H LEE
Examiner
Art Unit 1732
6/30/03

EHL
June 30, 2003